Instructions for P Treatment

[Screen 1]
This is an experiment, funded by a research foundation, to study decision making. You will be earn money in "experimental dollars" during the experiment. At the end of the experiment you will be paid in cash in real dollars (each experimental dollar is worth a real $0.13, or thirteen cents). The amount you will earn will depend on your and others' decisions. The maximum possible earning is $50 (real dollars) and the minimum possible is $8. You are likely to earn an amount in between. Please make sure you understand the decision process.

[Screen 2]
<div align="center">Your Group</div>

You will be placed in a group of four. The people in your group will not change during the experiment, but you will not know the identity of who is in your group, during the experiment or afterwards. The other three people in your group will have "screen names" of B, C, and D. Your screen name, on your screen, is A, but your screen name will be different on others' screens.

There will be 10 periods in the experiment. Although the real identity of each of the other people in your group is unknown to you, each screen name will refer to the same person during a period. (But at the end of each period the screen names will be randomly switched, and then fixed for the period.)

[Screen 3]
<div align="center">Earnings</div>

Each period is like the others, so we will describe how your earnings for the first period are determined.

At the beginning of the period each person in your group will receive $10 (experimental dollars). You must decide how to divide this amount between a group account and a personal account.

The money you assign to your personal account goes into your earnings.

An amount equal to 0.4 times the group's total assignment to the group account goes into your earnings.

Earnings = (amount in personal account) + (0.4)(total in group account)

[Screen 4]

The next four screens are set up to help you test your understanding of the experiment. For each of the screens that follows, there is a paper worksheet on your

desk. Fill in the blanks in the worksheet first, then enter the information in the practice decision screen. The numbers you type in the practice screens are for practice only and will net affect your earnings from the experiment.

Practice Questions

Practice 1.

Fill out the stage I section below for the following situation. The four members of your group each have $10. Every member of your group has assigned $10 to the group account and $0 to their personal account.

1. Amount you assigned to group account: $_____
2. Amount you assigned to your personal account: $_____
   (= $10 – group account assignment on line 1)
3. Total number of dollars assigned to your group account: $_____
4. Income from the group account for a member of you group: $_____
   (0.4 • group account total in line 3)
5. Your earnings after stage I: $_____
   (group account income in line 4 + personal account income in line 2)

Now, go back to the practice screen. Type in your contribution in the window and submit it to make sure your calculations are correct.

Practice 2.

Fill out the stage I section below for the following situation. The four members of your group each have $10. Every member of your group has assigned $0 to the group account and $10 to their personal account.

1. Amount you assigned to group account: $_____
2. Amount you assigned to your personal account: $_____
   (= $10 – group account assignment on line 1)
3. Total number of dollars assigned to your group account: $_____
4. Income from the group account for a member of you group: $_____
   (0.4 • group account total in line 3)
5. Your earnings after stage I: $_____
   (group account income in line 4 + personal account income in line 2)

Now, go back to the practice screen. Type in your contribution in the window and submit it to make sure your calculations are correct.

Practice 3.

Person 2 assigned $10 to the group account and $0 to his personal account, person 3 assigned $5 to the group account and $5 to his personal account and person 4 assigned $0 to the group account and $10 to his personal account.

Fill out the stage I section bellow for the above situation where you assigned $5 to the group account.

1. Amount you assigned to group account: $_____
2. Amount you assigned to your personal account: $_____
   (= $10 – group account assignment on line 1)
3. Total number of dollars assigned to your group account: $_____
4. Income from the group account for a member of you group: $_____
   (0.4 • group account total in line 3)
5. Your earnings after stage I: $_____
   (group account income in line 4 + personal account income in line 2)

Now, go back to the practice screen. Type in your contribution in the window and submit it to make sure your calculations are correct.

Practice 4.

Person 2 assigned $10 to the group account and $0 to his personal account, person 3 assigned $5 to the group account and $5 to his personal account and person 4 assigned $0 to the group account and $10 to his personal account.

Fill out the stage I section bellow for the above situation where you assigned $6 to the group account.

1. Amount you assigned to group account: $_____
2. Amount you assigned to your personal account: $_____
   (= $10 – group account assignment on line 1)
3. Total number of dollars assigned to your group account: $_____
4. Income from the group account for a member of you group: $_____
   (0.4 • group account total in line 3)
5. Your earnings after stage I: $_____
   (group account income in line 4 + personal account income in line 2)

How does this change affect the earnings of other members of your group, assuming that the switch of $1 from your individual to your group account is the only change?

Now, go back to the practice screen. Type in your contribution in the window and submit it to make sure your calculations are correct.

[Screen 8]

Reductions

There is another decision that affects your earnings. Once you learn the others' assignments to the group account, you have a chance to reduce others' earnings, and others have a chance to reduce your earnings. Suppose, in the last example, you decide to reduce B's earnings by $3, C's earnings by $5, and D's earnings by $0. The total amount of reductions you make on others' earnings is $8.

It costs you $0.25 for each $1 you reduce others' earnings. So your own earnings are reduced by (0.25)($8) = $2 in this example.

Just as you can reduce others' earnings, others can reduce yours. Suppose B reduces your earnings by $1, C by $3 and D by $5. The total reduction of your earnings by others is ($1 + $3 + $5) = $9. You will learn that your earnings have been reduced by a total of $9 but you will not learn who has reduced your earnings by what amount.

Similarly none of the others will learn by how much you have reduced their earnings, but only the total reductions.

Please fill in the sheet labeled practice 5 and the corresponding practice decision screen.

Practice 5.

It costs you $0.25 to reduce the income of another person by $1.00. Fill out the stage II section bellow for the following situation:

You assigned $5 to the group account and $5 to your personal account, person 2 assigned $10 to the group account and $0 to his personal account, person 3 assigned $5 to the group account and $5 to his personal account and person 4 assigned $0 to the group account and $10 to his personal account. You reduce person 2's earnings by $2, person 3's by $3 and person 4's by $4. You receive a total of $1 in reductions from other members of your group.

1. Amount you assigned to group account: $_____
2. Amount you assigned to your personal account: $_____
   (= $10 – group account assignment on line 1)
3. Total number of dollars assigned to your group account: $_____
4. Income from the group account for a member of you group: $_____
   (0.4 • group account total in line 3)
5. Your income after stage I: $_____

4

(group account income in line 4 + personal account income in line 2)
6. You reduced the earnings of others in your group by a total of: $_____
7. This cost you: $_____
   (0.25 * the sum of your reductions from line 6)
8. Other members of your group reduced your earnings by: $_____
9. The total change in your income from stage 2:   -$_____
   (line 7 + line 8)
10. Your total income for these two stages: $_____

Now, go back to the practice screen. Enter and submit your reductions to make sure your calculations are correct.

[Screen 9]
<div align="center">Your Net Earnings</div>

Your net earnings for a period will be:

      Amount in personal account +
      (0.4)(Total in group account) –
      (0.25)(Total of your reductions of others) –
      Total of reductions of your earnings made by others.

At the end of the experiment, the net earnings for the 10 periods will be totaled and converted from experimental dollars to real dollars. Then $5 will be added for your participation.

[Screen 10]

<div align="center">Conclusion</div>

During the experiment, there is to be no communication, apart from the entering of your decisions. Therefore, it is important that you understand the decision-making process fully before the experiment begins. Please raise your hand now if you have any questions. The experiment will begin once all questions have been answered.

Instructions for the RP Treatment

[Screen 1]

This is an experiment, funded by a research foundation, to study decision making.
You will be earning money in experimental dollars during the experiment.
At the end of the experiment you will be paid in cash in real dollars (each
experimental dollar is worth a real seven and a half cents). The amount you will
earn will depend on your and others' decisions. The maximum possible earning is
$38.50 (real dollars) and the minimum possible is $5.00. You are likely to earn an
amount in between. Please make sure you understand the decision process.

[Screen 2]

Your Group

You will be placed in a group of four. The people in your group will not change
during the experiment, but you will not know the identity of who is in your group,
during the experiment or afterwards. The other three people in your group will have
screen names of B, C, and D. You will be identified on your own screen as
"You," but your name on others' screens will also be B, C or D.

There will be 20 periods or rounds in the experiment. Although the same people will
remain in your group from round to round, their "screen names" will randomly change,
meaning that whoever is identified to you as "B" in round 1 is probably not the same
group member as the person identified to you as "B" in round 2, and so on.

[Screen 3]

Earnings

Each round is like the others, so we will describe how your earnings for the first round
are determined.

At the beginning of the round each person in your group will receive $10 (experimental
dollars). Each of you must decide how to divide this amount between a group account
and a personal account.

The money you assign to your personal account goes into your earnings.

An amount equal to 0.4 times the group's total assignment to the group account goes into
your earnings.

Earnings = (amount in personal account) + (0.4) x (total in group account)

[Screen 4]

The next four screens are designed to help you test your understanding of the experiment. The screens are set up in the manner of the actual decision screens of the experiment, but the numbers you will be asked to enter on them are for practice, and do not affect your earnings.

Corresponding to each screen, there is a paper worksheet on your desk which you should fill in first before typing the numbers onto the screen itself, as instructed.

Practice Questions

Practice 1.

Fill out the stage I section below for the following situation. The four members of your group each have $10. Every member of your group has assigned $10 to the group account and $0 to their personal account.

1. Amount you assigned to group account: $_____
2. Amount you assigned to your personal account: $_____
    (= $10 – group account assignment on line 1)
3. Total number of dollars assigned to your group account: $_____
4. Income from the group account for a member of you group: $_____
    (0.4 • group account total in line 3)
5. Your earnings after stage I: $_____
    (group account income in line 4 + personal account income in line 2)

Now, go back to the practice screen. Type in your contribution in the window and submit it to make sure your calculations are correct.

Practice 2.

Fill out the stage I section below for the following situation. The four members of your group each have $10. Every member of your group has assigned $0 to the group account and $10 to their personal account.

1. Amount you assigned to group account: $_____
2. Amount you assigned to your personal account: $_____
    (= $10 – group account assignment on line 1)
3. Total number of dollars assigned to your group account: $_____
4. Income from the group account for a member of you group: $_____
    (0.4 • group account total in line 3)
5. Your earnings after stage I: $_____
    (group account income in line 4 + personal account income in line 2)

Now, go back to the practice screen. Type in your contribution in the window and submit it to make sure your calculations are correct.

Practice 3.

Person 2 assigned $10 to the group account and $0 to his personal account, person 3 assigned $5 to the group account and $5 to his personal account and person 4 assigned $0 to the group account and $10 to his personal account.

Fill out the stage I section bellow for the above situation where you assigned $5 to the group account.

1. Amount you assigned to group account: $_____
2. Amount you assigned to your personal account: $_____
   (= $10 – group account assignment on line 1)
3. Total number of dollars assigned to your group account: $_____
4. Income from the group account for a member of you group: $_____
   (0.4 • group account total in line 3)
5. Your earnings after stage I: $_____
   (group account income in line 4 + personal account income in line 2)

Now, go back to the practice screen. Type in your contribution in the window and submit it to make sure your calculations are correct.

[Screen 5]

Consider what would happen in practice 3 if you increase your assignment to the group account by $1.

Your personal account would go down by $1, reducing your earnings by $1.

Your group account would go up by $1, increasing your earnings by $0.40, for a net reduction of $0.60

But each of the other people in your group would increase their earnings by $0.40, for a total increase of $1.20 for the others in your group.

[Screen 6]

Reductions and Additions

There is another decision that affects your earnings. After you learn the others' assignments to the group account, you have a chance to alter their earnings, and they have a chance to alter yours. Specifically, for a cost of $0.25 (twenty-five experimental

cents), you can cause the earnings of a group member of your choosing to be reduced by $1 and those of some other individual to be increased by $1. Whatever amount you reduce some individual's earnings by must be added to the earnings of another individual or individuals. Some examples follow.

[Screen 7]

Example 1

You spend $0.75 of your earnings.
You have B's earnings reduced by $1.
You have C's earnings reduced by $2.
You have D's earnings increased by $3.

Example 2

You spend $0.50 of your earnings.
You have C's earnings reduced by $2.
You have B's earnings increased by $1.
You have D's earnings increased by $1.

Example 3

You spend $1.00 of your earnings.
You have D's earnings reduced by $4.00.
You have B's earning increased by $4.00.
You leave C's earnings unchanged.

Notice that you can reduce the earnings of no more than two individuals, since the money by which some have their earnings reduced must be added to the earnings of at least one other (and never to your own earnings).

Of course, you need not change anyone's earnings, in which case you would not have to pay money at this stage.

[Screen 8]

Just as you can reduce or increase others' earnings, others can reduce or increase yours. The costs of doing this are the same for everyone.

There are two limits to the earnings alterations that can occur.

First, the most you can spend on altering others' earnings is the amount you have earned in the first part of the round.

Second, you cannot reduce anyone's earnings to less than 0 in any round.

If you enter a reduction to someone's earnings that brings their earnings below zero, you will be prompted to enter a different number. If several group members jointly reduce someone's earnings to less than zero but none of their decisions has this effect by itself, their spending on reductions will go through and they will receive no special prompt, but the person targeted will still not earn less than zero, which is the minimum that can be earned in each round.

[Screen 9]

After these decisions have been taken, you and the other members of your group will learn the net total amount (if any) by which your earnings have been reduced or increased. You will not be told who in particular reduced or increased your earnings by how much. This also means that others will not know whether you as an individual took any particular action that affected their earnings.

Please fill in the sheet labeled practice 4 and the corresponding practice decision screen.

Practice 4.

  You   assigned $5 to the group account and $5 to your personal account,
person B assigned $10 to the group account and $0 to his or her personal account,
person C assigned $5 to the group account and $5 to his or her personal account, and
person D assigned $0 to the group account and $10 to his or her personal account.

You learn that the total in the group account is $20, and you pay $1 to learn what the individual assignments were.

You reduce person B's earnings by $4,
     increase person C's earnings by $4, and
     leave person D's earnings unchanged.

The net change in your income due to others' decisions is a decline of $4.

(1) Amount you assigned to group account . . . . $_____
(2) Amount you assigned to your personal account . . . . $_____
     [$10 – group account assignment on line (1)]
(3) Total number of dollars assigned to your group account . . . . . . $_____
(4) Income from the group account for a member of you group . . . $_____
     [(0.4) • group account total in line (3)]
(5) Your earnings after the assignment decisions . . . .$_____
     [group account income in line (4) + personal account
       income in line (2)]

10

(6) Your cost for information $_____
(7) Net impact on you of adjustments by others . . . . . . $_____
(8) Your total earnings for this period . . . . $_____
    [Your earnings after the assignment decisions on line (5) minus
      your information cost on line (6) plus your net gain or loss
      due to others' adjustments, on line (7)]

Please go to the practice screen and enter the values as directed..

[Screen 10]

Your Net Earnings

Your net earnings for a round will be:

        Amount in personal account +
        (0.4)(Total in group account) -
        (0.25)(Total of your reductions) +
        Total net change of your earnings made by others

(Remember that the last line is a negative number if your earnings were reduced on
balance.)

At the end of the experiment, the net earnings for the 20 rounds will be totaled and
converted from experimental dollars to real dollars. Then $5 will be added for your
participation.

[Screen 11]

During the experiment, you are asked to be as quiet as possible. The only
communication that is permitted is that resulting from the inputting of your decisions into
your computer terminal. It is important that you understand how the experiment works
before we begin.

Are there any questions?

Instructions for the CIP Treatment

[Screen 1]
This is an experiment, funded by a research foundation, to study decision-making. You will be earning money in "experimental dollars" during the experiment. At the end of the experiment you will be paid in cash in real dollars (one experimental dollar converts to seven and a half real cents). The amount you will earn will depend on your and others' decisions. The maximum possible earning is $35.80 (real dollars) and the minimum possible is $5. You are likely to earn an amount in between. Please make sure you understand the decision process.

[Screen 2]

Structure of the Experiment

The experiment consists of twenty distinct periods or rounds of decision-making. Each of these twenty periods shares a common structure, consisting of two stages.

[Screen 3]

Your Group

At the beginning of the experiment, you will be randomly matched with three other participants, to form a group of four that will remain together throughout the experiment. The other three people who are in your group will be identified to you as "B," "C," and "D," although the letters will be shuffled from period to period, so that the person identified as "B" in one period is equally likely to be called "C" or "D" in the next one. You will not know the actual identities of the other members of your group either while making your decisions or after the experiment.

[Screen 4]

Your First Decision: Assigning Money to Group and Personal Accounts

At the beginning of every period each person in your group will receive $10 (experimental dollars). Each of you must decide how to divide this amount between a group account and a personal account.

The money you assign to your personal account goes into your earnings.

An amount equal to 0.4 times the group's total assignment to the group account goes into your earnings.

Your earnings = (amount in your personal account) + (0.4)(total in group account)

[Screen 5]

The next four screens illustrate how the experiment works. Fill in the blanks of your worksheet first, then enter the information in the practice decision screen. The numbers you type in the practice screens are for practice only and will not affect your earnings from the experiment.

Practice Questions

Practice 1.

The four members of your group each have $10. Every member of your group has assigned $10 to the group account and $0 to their personal account. Fill in the blanks on the right.

(1) Amount you assigned to group account .... $_____
(2) Amount you assigned to your personal account .... $_____
      [= $10 – group account assignment on line (1)]
(3) Total number of dollars assigned to your group account ...... $_____
(4) Income from the group account for a member of your group ...$_____
      [0.4 • group account total in line (3)]
(5) Your earnings after the assignment decisions ....$_____
    [group account income in line (4) + personal account income
     in line (2)]

Now, go back to the practice screen. Type in your assignment to the group account, press enter, and check your calculation.

Practice 2.

The four members of your group each have $10. Every member of your group has assigned $0 to the group account and $10 to their personal account. Fill in the blanks on the right.

(1) Amount you assigned to group account .... $_____
(2) Amount you assigned to your personal account .... $_____
      [= $10 – group account assignment on line (1)]
(3) Total number of dollars assigned to your group account ...... $_____
(4) Income from the group account for a member of your group ...$_____
      [0.4 • group account total in line (3)]
(5) Your earnings after the assignment decisions ....$_____
    [group account income in line (4) + personal account income
     in line (2)]

Type in your assignment to the group account, press enter, and check your calculation.

Practice 3.

Person B assigned $10 to the group account and $0 to his or her personal account,
person C assigned $5 to the group account and $5 to his or her personal account,
person D assigned $0 to the group account and $10 to his or her personal account, and
   you   assigned $5 to the group account and $5 to your personal account.

Fill in the blanks on the right.

(1) Amount you assigned to group account . . . . $_____
(2) Amount you assigned to your personal account . . . . $_____
        [= $10 – group account assignment on line (1)]
(3) Total number of dollars assigned to your group account . . . . . . $_____
(4) Income from the group account for a member of your group . . . $_____
        [0.4 • group account total in line (3)]
(5) Your earnings after the assignment decisions . . . . $_____
    [group account income in line (4) + personal account income
     in line (2)]

Type in your contribution, press enter, and check your calculation.

[Screen 6]

Consider what would happen in practice 3 if you increase your assignment to the group
account by $1.

Your personal account would go down by $1, reducing your earnings by $1.

Your group account would go up by $1, increasing your earnings by $0.40, for a net
reduction of $0.60

But each of the other people in your group would increase their earnings by $0.40, for a
total increase of $1.20 for the others in your group.

[Screen 7]

A Cost of Information

In each period of the experiment, you will automatically find out the total amount
assigned to the group account, but you will not learn what amounts were assigned by
each individual unless you pay an experimental dollar to obtain this information. For
example, in practice 3, if you had not paid a dollar for the information, you would see
only the following screen (please click Next).

[Screen 8]

[A mock-up of the experiment decision screen is shown containing the subject's own contribution and the total group contribution in the Practice 3 situation, but not showing the individual contributions of B, C and D. On this screen is the following text:]

At the bottom of your screen you'll be asked whether you want to pay $1 to learn the individual assignments of other group members. If you click Yes, the screen will change to one like you saw a few screens ago. Note, for example, that the current screen could be consistent with the one in Practice 3, but also with the following screen:

[Screen 9]

[A mock-up of the experiment decision screen is shown with specific values provided for the contributions of individuals; on this screen, we see B assigns 3, C assigns 9, D assigns 3.]

[Screen 10]

Subjects have no way to know which members of their group pay for information on individual assignments and which ones do not.

[Screen 11]

A Second Stage

If you have paid to learn the assignments to the group account by the others in your group, you will also be given a chance to alter their earnings, at no additional cost to yourself. In particular, you can cause the earnings of one or two members to go down by a total of up to 10 experimental dollars. For example, you can reduce B's earnings by 10, or you can reduce the earnings of B and D by 5 each, or you can reduce C's earnings by 3 and D's earnings by 4, and so on. The combined total amount by which you reduce others' earnings may be no greater than 10 in any one period.

[Screen 12]

Example

Suppose, using the original assignments in Practice 3, that you decide to:

    reduce B's earnings by $4,
    not reduce C's earnings
    not reduce D's earnings

Suppose, further, that

B leaves your earnings unchanged
C reduces your earnings by $7
D reduces your earnings by $1

The net change in your earnings due to these decisions is (-$7) + (-$1) = -$8.

You will learn the total change in your earnings, but you will not be told what decisions by what individuals led to that outcome.

Please fill in the sheet labeled practice 4 and the corresponding practice decision screen.

Practice 4.

     You assigned $5 to the group account and $5 to your personal account,
person B assigned $10 to the group account and $0 to his or her personal account,
person C assigned $5 to the group account and $5 to his or her personal account, and
person D assigned $0 to the group account and $10 to his or her personal account.

You learn that the total in the group account is $20, and you pay $1 to learn what the individual assignments were.

You reduce person B's earnings by $4,
     don't reduce C's earnings
     don't reduce D's earnings

The net change in your income due to others' decisions is a decline of $4.

(1) Amount you assigned to group account . . . . $_____
(2) Amount you assigned to your personal account . . . . $_____
     [$10 – group account assignment on line (1)]
(3) Total number of dollars assigned to your group account . . . . . . $_____
(4) Income from the group account for a member of your group . . . $_____
     [(0.4) • group account total in line (3)]
(5) Your earnings after the assignment decisions . . . . $_____
     [group account income in line (4) + personal account
      income in line (2)]
(6) Your cost for information. . . . .$_____
(7) Sum of reductions of your earnings by others . . . . $_____
(8) Your total earnings for this period . . . . $_____
     [Your earnings after the assignment decisions on line (5) minus
      your information cost on line (6) minus reductions of your
      earnings by others, on line (7)]

Please go to the practice screen and enter the values as directed.

[Screen 13]

Your Net Earnings

To review, your net earnings for a period will be:

      Amount in personal account
      + (0.4)(total in group account)
      – 1, if you elect to observe individual assignments to the group account
      – reductions of your earnings by others

[Screen 14]

Maximum Reductions and Minimum Earnings

It is not possible for you to earn less than 1 in a period in which you do not pay for assignment information, or less than 0 in a period in which you pay for that information.

To assure that this is the case, reductions may sometimes have to be modified by the computer.

For example, suppose that person B earned 22 in the assignment stage of a certain period, that B did not pay for information, and that You, person C, and person D each decide to reduce B's earnings by 10. The total planned reduction of B's earnings would be 30, but since this amount would bring B's earnings to less than 0, it must be modified. To do this, the computer would automatically change the reductions of B by You, C and D to 7 each instead of 10 each (because $7 \bullet 3 = 21$).

[Screen 15]

Each period you begin with a new $10 and each period's earnings are independent of the others. The right side of your decision screen will display a record of your earnings, period by period.

[Screen 16]

Conclusion

During the experiment, there is to be no communication, apart from the entering of your decisions. Therefore, it is important that you understand the decision-making process fully before the experiment begins. Please raise your hand now if you have any questions. The experiment will begin once all questions have been answered.

Instructions for CIRP Treatment

[Screen 1]
This is an experiment, funded by a research foundation, to study decision-making. You will be earning money in "experimental dollars" during the experiment. At the end of the experiment you will be paid in cash in real dollars (one experimental dollars converts to 7 real cents). The amount you will earn will depend on your and others' decisions. The maximum possible earning is $35.80 (real dollars) and the minimum possible is $5. You are likely to earn an amount in between. Please make sure you understand the decision process.

[Screen 2]

Structure of the Experiment

The experiment consists of twenty distinct periods or rounds of decision-making. Each of these twenty periods shares a common structure, consisting of two stages.

[Screen 3]

Your Group

At the beginning of the experiment, you will be randomly matched with three other participants, to form a group of four that will remain together throughout the experiment. The other three people who are in your group will be identified to you as "B," "C," and "D," although the letters will be shuffled from period to period, so that the person identified as "B" in one period is equally likely to be called "C" or "D" in the next one. You will not know the actual identities of the other members of your group either while making your decisions or after the experiment.

[Screen 4]

Your First Decision: Assigning Money to Group and Personal Accounts

At the beginning of every period each person in your group will receive $10 (experimental dollars). Each of you must decide how to divide this amount between a group account and a personal account.

The money you assign to your personal account goes into your earnings.

An amount equal to 0.4 times the group's total assignment to the group account goes into your earnings.

Your earnings = (amount in your personal account) + (0.4)(total in group account)

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[Screen 5]

The next four screens illustrate how the experiment works. Fill in the blanks of your worksheet first, then enter the information in the practice decision screen. The numbers you type in the practice screens are for practice only and will net affect your earnings from the experiment.

Practice Questions

Practice 1.

The four members of your group each have $10. Every member of your group has assigned $10 to the group account and $0 to their personal account. Fill in the blanks on the right.

(1) Amount you assigned to group account   . . . . $_____
(2) Amount you assigned to your personal account   . . . . $_____
       [= $10 – group account assignment on line (1)]
(3) Total number of dollars assigned to your group account . . . . . . $_____
(4) Income from the group account for a member of your group . . .$_____
       [0.4 • group account total in line (3)]
(5) Your earnings after the assignment decisions . . . .$_____
    [group account income in line (4) + personal account income
     in line (2)]

Now, go back to the practice screen. Type in your assignment to the group account, press enter, and check your calculation.

Practice 2.

The four members of your group each have $10. Every member of your group has assigned $0 to the group account and $10 to their personal account. Fill in the blanks on the right.

(1) Amount you assigned to group account   . . . . $_____
(2) Amount you assigned to your personal account   . . . . $_____
       [= $10 – group account assignment on line (1)]
(3) Total number of dollars assigned to your group account . . . . . . $_____
(4) Income from the group account for a member of your group . . .$_____
       [0.4 • group account total in line (3)]
(5) Your earnings after the assignment decisions . . . .$_____
    [group account income in line (4) + personal account income
     in line (2)]

Type in your assignment to the group account, press enter, and check your calculation.

Practice 3.

Person B assigned $10 to the group account and $0 to his or her personal account,
person C assigned $5 to the group account and $5 to his or her personal account,
person D assigned $0 to the group account and $10 to his or her personal account, and
    you   assigned $5 to the group account and $5 to your personal account.

Fill in the blanks on the right.

(1) Amount you assigned to group account   . . . . $_____
(2) Amount you assigned to your personal account   . . . . $_____
        [= $10 – group account assignment on line (1)]
(3) Total number of dollars assigned to your group account . . . . . . $_____
(4) Income from the group account for a member of your group . . . $_____
        [0.4 • group account total in line (3)]
(5) Your earnings after the assignment decisions . . . . $_____
    [group account income in line (4) + personal account income
      in line (2)]

Type in your contribution, press enter, and check your calculation.

[Screen 6]

Consider what would happen in practice 3 if you increase your assignment to the group
account by $1.

Your personal account would go down by $1, reducing your earnings by $1.

Your group account would go up by $1, increasing your earnings by $0.40, for a net
reduction of $0.60

But each of the other people in your group would increase their earnings by $0.40, for a
total increase of $1.20 for the others in your group.

[Screen 7]

A Cost of Information

In each period of the experiment, you will automatically find out the total amount
assigned to the group account, but you will not learn what amounts were assigned by
each individual unless you pay an experimental dollar to obtain this information. For
example, in practice 3, if you had not paid a dollar for the information, you would see
only the following screen (please click Next).

[Screen 8]

[A mock-up of the experiment decision screen is shown containing the subject's own contribution and the total group contribution in the Practice 3 situation, but not showing the individual contributions of B, C and D. On this screen is the following text:]

At the bottom of your screen you'll be asked whether you want to pay $1 to learn the individual assignments of other group members. If you click Yes, the screen will change to one like you saw a few screens ago. Note, for example, that the current screen could be consistent with the one in Practice 3, but also with the following screen:

[Screen 9]

[A mock-up of the experiment decision screen is shown with specific values provided for the contributions of individuals; on this screen, we see B assigns 3, C assigns 9, D assigns 3.]

[Screen 10]

Subjects have no way to know which members of their group pay for information on individual assignments and which ones do not.

[Screen 11]

A Second Stage

If you have paid to learn the assignments to the group account by the others in your group, you will also be given a chance to alter their earnings, at no additional cost to yourself. In particular, you can cause the earnings of one or two members to go down, assigning those earnings instead to the remaining member or members. For example, you can reduce B's earnings by 10, giving 5 to C and 5 to D. Or you can reduce the earnings of B and D by 5 each, giving 10 to C. The combined total amount by which you reduce others' earnings may be no greater than 10 in any one period, and the whole amount by which you reduce the earnings of some must equal the amount, in total, that you give to others.

[Screen 12]

Example

Suppose, using the original assignments in Practice 3, that you decide to:

  reduce B's earnings by $4,
  increase C's $4, and
  leave D's earnings unchanged

Suppose, further, that

> B leaves your earnings unchanged
> C reduces your earnings by $7
> D increases your earnings by $3

The net change in your earnings due to these decisions is $3 - $7 = -$4.

You will learn the total change in your earnings, but you will not be told what decisions by what individuals led to that net outcome.

Please fill in the sheet labeled practice 4 and the corresponding practice decision screen.

Practice 4.

    You   assigned $5 to the group account and $5 to your personal account,
person B assigned $10 to the group account and $0 to his or her personal account,
person C assigned $5 to the group account and $5 to his or her personal account, and
person D assigned $0 to the group account and $10 to his or her personal account.

You learn that the total in the group account is $20, and you pay $1 to learn what the individual assignments were.

You reduce person B's earnings by $4,
    increase person C's earnings by $4, and
    leave person D's earnings unchanged.

The net change in your income due to others' decisions is a decline of $4.

(1) Amount you assigned to group account . . . . $_____
(2) Amount you assigned to your personal account . . . . $_____
        [$10 – group account assignment on line (1)]
(3) Total number of dollars assigned to your group account . . . . . . $_____
(4) Income from the group account for a member of you group . . . $_____
        [(0.4) • group account total in line (3)]
(5) Your earnings after the assignment decisions . . . .$_____
        [group account income in line (4) + personal account
         income in line (2)]
(6) Your cost for information $_____
(7) Net impact on you of adjustments by others . . . . . . $_____
(8) Your total earnings for this period . . . . $_____
        [Your earnings after the assignment decisions on line (5) minus
         your information cost on line (6) plus your net gain or loss
         due to others' adjustments, on line (7)]

Please go to the practice screen and enter the values as directed.

[Screen 13]

<div align="center">Your Net Earnings</div>

To review, your net earnings for a period will be:

> Amount in personal account
> + (0.4)(total in group account)
> -   1, if you elect to observe individual assignments to the
>   group account
> - (net effect of adjustments of your earnings by others)

[Screen 14]

<div align="center">Maximum Adjustments and Minimum Earnings</div>

It is not possible for you to earn less than 1 in a period in which you do not pay for assignment information, or less than 0 in a period in which you pay for that information.

To assure that this is the case, negative adjustments may sometimes have to be modified by the computer.

For example, suppose that person B earned 22 in the assignment stage of a certain period, that B did not pay for information, and that You, person C, and person D each decide to reduce B's earnings by 10. The total planned reduction of B's earnings would be 30, but since this amount would bring B's earnings to less than 0, it must be modified. To do this, the computer would automatically change the reductions of B by You, C and D to 7 instead of 10 (because 7x3 = 21).

This would also affect the amount you have available to give to others in your group. Instead of giving 10 from B to other individuals, you could now give only 7. The computer would automatically reassign the amount you had given in proportion to your original decisions. For example, if you had given 6 to C and 4 to D, the computer would adjust this so that you give 4.2 to C and 2.8 to D.

[Screen 15]

Each period you begin with a new $10 and each period's earnings are independent of the others. The right side of your decision screen will display a record of your earnings, period by period.

[Screen 16]

<div align="center">Conclusion</div>

During the experiment, there is to be no communication, apart from the entering of your decisions. Therefore, it is important that you understand the decision-making process fully before the experiment begins. Please raise your hand now if you have any questions. The experiment will begin once all questions have been answered.